Ch. 12: Developing Strategies for Whole-Number Computation Kellie Ball

Addition and Subtraction (p. 213 – 226)

|  |  |
| --- | --- |
| **Representative TN State Curriculum Standards**  *Kindergarten –*  GLE: 0106.2.3 Develop strategies for learning basic addition facts and related subtraction facts  Checks for Understanding:  0106.2.10 Use models (such as discrete objects, connecting cubes, and number lines) to represent “part-whole,” “adding to,” “taking away from,” and “comparing to” situations to develop understanding of the meaning of addition and subtraction.  0106.2.12 Use various models to develop strategies for solving arithmetic problems  0106.2.13 Solve problems that require addition and subtraction of numbers through 100  *1st Grade –*  GLE: 0206.2.3 Use efficient and accurate strategies to develop fluency with multi-digit addition and subtraction  Checks for Understanding:  0206.2.7 Develop fluency at recalling basic addition facts and related subtraction facts.  0206.2.8 Use efficient procedures, and understand why they work, to solve problems involving the addition and subtraction of two- and three-digit whole numbers (including those that require regrouping for addition only.)  0206.2.11 Solve addition and subtraction problems. | |
| Time: 5 minutes | This book is a tool to help with the subtraction portion of the chapter   * The book references several words and phrases that have the same meaning as subtraction * There are items and numbers all over the illustrated pages so that children can see the numbers and see representations of the numbers * The story illustrates real life situations that children can relate to that involving math * Ask students to hold up numbers on their fingers every time they hear a number * Pause before saying answers to subtraction problems listed in the story, allow students to answer out loud |

**Virtual Manipulatives** Time: 5 minutes

|  |
| --- |
| **Base Blocks Addition**  <http://nlvm.usu.edu/en/nav/frames_asid_154_g_1_t_1.html>  This manipulative allows you to perform addition problems using base ten blocks. You can add or remove as many blocks as you want from the screen and if you click and drag your mouse over a group of 10 blocks, it will regroup them. This manipulative also allows you to practice addition with random generated problems. |
| **Base Block Subtraction**  <http://nlvm.usu.edu/en/nav/frames_asid_155_g_1_t_1.html?from=topic_t_1.html>  This manipulative allows you to perform subtraction problems using base ten blocks. You can add or remove as many blocks as you want from the screen and if you click and drag your mouse over a group of 10 blocks, it will regroup them. This manipulative also allows you to practice addition with random generated problems. |

**Activities from the textbook**

|  |  |
| --- | --- |
| Teaching addition – 2 digits | Figure 12.5  Materials: Number line |
| Teaching subtraction by counting up | Figure 12.6  Materials: Number line |
| Teaching take-away subtraction | Figure 12.7  Materials: Number line |
| Teaching addition algorithms | Figure 12.8  Materials: 10 frame, base-10 blocks |
| Teaching subtraction algorithms | Figure 12.12  Materials: 10 frame, base-10 blocks |

**Lesson Plan**

Do It With Dominoes

<http://illuminations.nctm.org/LessonDetail.aspx?id=U47>

Description: This lesson is a unit focused on addition. Each lesson targets a different model of addition (counting, number line, sets, and balance equation) using dominoes. This unit also highlights the relationship between addition and subtraction. These lessons are all great to go along with this topic because they teach children that there are multiple ways to do addition.